Current Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (previously presented) An electric distribution system for a vehicle having first and second networks at different higher and lower voltage levels and an architecture in which at least said first of said networks is susceptible to being fed from said second network voltage supply through a DC/DC converter, and is also fed from a battery and each one of the load groups whose supply is assigned to a corresponding converter includes a protection means based on fuses in at last some of the loads of each set, one of said two networks being connected to a generator and at least one of said two networks being fed by energy storage means such as a battery, characterized in that said electric distribution system comprises several shunted DC/DC converters, connecting said first and second networks at different voltage levels, all of them connected at a common point or output, each one of whose DC/DC converters has a series or set of differentiated loads located in different areas of the vehicle assigned to it, belonging to at least said lower voltage network, the power that each one of said converters can supply being lower than that of the maximum consumption of all said assigned loads, such that the power supply to each load set will be carried out at certain moments at the expense of more than one of said DC/DC converters or of a battery, and in that said converters, in order to supply different load groups located in different areas of the vehicle, are integrated in a master/slave architecture controlled from a control center, including a microcontroller with the capacity to manage the power to be sent at all times to said loads by each one of said converters in a synchronized manner, the connection between DC/DC converters, slaves, and control center including at least one high speed communication bus, by means of which the needs of each load group is reported.

Claim 2 (previously presented) A system according to claim 1, characterized in that each one of the DC/DC converters has at least one tapping point for detecting the supply current required by the loads to be supplied and processed by each DC/DC converter, whose

information is sent to said control center integrating the master, through said communication bus.

Claim 3 (original) A system according to claim 2, characterized in that all said shunted converters are equal.

Claim 4 (cancelled)

Claim 5 (previously presented) A system according to claim 1, characterized in that each one of said first and second networks includes a common connection point or output of the different converters and is also fed from a battery and each one of the load groups whose supply is assigned to a corresponding converter includes a protection means based on controlled switching devices in at least some of the loads of each set.

Claim 6 (previously presented) A system according to claim 1, characterized in that each one of said first and second networks includes a common connection point or output of the different converters and is also fed from a battery and each one of the load groups whose supply is assigned to a corresponding converter includes a protection means based on controlled fuses for some of the loads and based on controlled switching devices for others of said loads of each set thereof.

Claim 7 (original) A system according to claim 1, characterized in that said first network is a lower voltage level network fed from a first battery and said second network is a higher voltage level network fed from a second battery.

Claim 8 (previously presented) A system according to claim 2, characterized in that at least two of said DC/DC voltage converters are two-way converters.

Claim 9 (original) A system according to claim 2, characterized in that said higher voltage network supplies a series of loads, also sectorized and associated to each one of said converters.

Claim 10 (previously presented) A method for electric distribution for a motorized vehicle having first and second networks at different higher and lower voltage levels, wherein at least a first of said networks is fed from the second voltage supply network through a DC/DC converter, one of said two networks being connected to a generator and each of the two networks is fed by an energy storage means such as a battery, characterized in that the power to the loads flows through a plurality of DC/DC converters in shunted arrangement between said two networks at different voltage levels with equalization of the outputs thereof by means of control of the output of each converter from a control center acting as master of a master/slave architecture, with said DC/DC converters as slaves, integrating a microcontroller with the capacity to manage the power to be sent at all times to the loads on the part of each one of said converters in a synchronized manner, and the connection between said DC/DC converters and said control center including at least one high speed communication bus.

Claim 11 (previously presented) A method according to claim 10, characterized in that it carries out a permanent detection of the intensity required by each load set and processed by the corresponding converter assigned to said group, said detection information being sent through said bus to the system's control center.

Claim 12 (previously presented) A system according to Claim 1, wherein said at least one high speed communications bus is selected from the group comprising CAN and VAN buses.

Claim 13 (previously presented) A system according to Claim 5, wherein said controlled switching devices are FET transistors.

Claim 14 (previously presented) A system according to Claim 6, wherein said controlled switching devices are FET transistors

Claim 15 (previously presented) A system according to Claim 10, wherein said at least one communications bus is selected from the group comprising CAN and VAN buses.